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09/944,536	08/31/2001	Lee C. Moore	D/A0A45	3291

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Patrick R. Roche, Esq.
Fay, Sharpe, Fagan, Minnich & McKee, LLP
1100 Superior Avenue, 7th Floor
Cleveland, OH 44114-2518

EXAMINER
KOYAMA, KUMIKO C

ART UNIT	PAPER NUMBER
2887	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	09/944,536	MOORE, LEE C.
Office Action Summary	Examiner	Art Unit	
	KUMIKO C. KOYAMA	2887	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 October 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2,4-8,10-13,15-18 and 20-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>7 and 8</u> is/are allowed.

6)☒ Claim(s) <u>2,4-6,10-13,15-18 and 20-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

PTOL-326 (Rev. 08-06)   **Office Action Summary**   Part of Paper No./Mail Date 20090120

DETAILED ACTION

Response received on October 24, 2008 has been acknowledged.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 2, 4, 5, 10-13, 18 and 20-28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sotomayor (US 5,963,205) in view of Borrey et al (US 5,159,667).

Re claims 2, 4, 5 and 22-27: Sotomayor discloses an automatic index creation for a word

processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is

scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches

searching the document to find occurrences of items corresponding to the define sub-section

delimiter. Sotomayor also discloses that for the table-of-contents index list 43, the summary page

generator 40 always generates all 6 heading levels rather than giving the user the ability to select

the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches

generating the index for the document with all found items corresponding to the sub-section

delimiter occurrences.

Satomayor fails to teach determining a sub-section delimiter definition including at least

one delimiter characteristic, wherein determining a sub-section delimiter comprises a user

indicating at least one of a font size, a font style, a text string, a text location description, and a

specific point coordinate within the document or wherein determining a sub-section delimiter

comprises a user placing a predetermined machine-readable symbol representing a demarcation

point on a printed version of the document as the sub-section delimiter.

Borrey discloses an application of a digital scanning device 1 to a document (col 4, lines

60-65). The output of the scanning device is a data stream containing a digital image of the

document in a machine readable form (col 4, lines 60-65). Borrey also discloses a matching and

labeling program 9 that identifies the document by class and sub-class and labels the objects in

the document (col 5, lines 1-5). The system identifies a document by dividing its relevant areas

into segments. The structural characteristics, i.e., the segment's physical location of the area on

the document, and the relational characteristics, i.e., the segment's location with respect all the

other segments in the document are matched against the expected physical and relational

characteristics provided by the document knowledge base (col 5, lines 20-27). Borrey also

discloses a retrieval and execution program 11 that allows a system operator to select retrieval

criteria for a certain image and the program will search the database 13 for records

corresponding to the search criteria. When a match is found between the request and an image

file, the appropriate image record is brought from the image data storage file 3 and displayed on

CRT or is printed (col 23, lines 40-47). During the classification process, described above, the

various relevant segmented areas of a document are labeled as known objects by the system. This

means that these known areas such as an address, a date or an account number can be searched

for and retrieved by the system (col 23, lines 50-56). Borrey also discloses that in another

exemplary embodiment, the retrieval and execution program 11 is used to create tables of

contents and abstracts of documents. By defining the characteristics of titles and areas of

importance of certain documents and placing this information in the execution knowledge base

15, the matching and labeling program 9 will create a table of all objects in documents meeting

these criteria. The retrieval and execution program 11 will then, for each class of preselected

document, present on the CRT or print a list of all titles or relevant areas, thereby creating a table

of contents. Direct access to the specific page on which the object is located is also provided 9col

25, lines 54-66).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to integrate the teachings of Borrey to the teachings of Sotomayor such

that paper documents can be electronically processed and stored in an organized manner to

faciliate a retrieval of a document, words or section.

Re claims 10-13: Sotomayor discloses an automatic index creation for a word processor.

Sotomayor discloses that the IPF paragraph objects for the source document 20 is scanned to find

all headings in a document (col 15, lines 60-63). Such disclosure teaches a delimiter searcher

operative to search for location information regarding the occurrences corresponding to the

delimiter definition with the electronic version of the document. Sotomayor also discloses that

for the table-of-contents index list 43, the summary page generator 40 always generates all 6

heading levels rather than giving the user the ability to select the number of level headings (col

15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches a document divider operative to

divide the document into sub-sections based on the recorded information regarding the

occurrences corresponding to the delimiter definition.

Sotomayor fails to teach a document input device operative to provide an electronic version of a document, a document storage device operative to store the electronic version of the document, a delimiter search to search for and record text and text location, a user interface operative to transfer information between a document processor operator and portions of the document processor, and a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition.

Borrey discloses an application of a digital scanning device 1 to a document (col 4, lines 60-65). The output of the scanning device is a data stream containing a digital image of the document in a machine readable form (col 4, lines 60-65). Borrey also discloses a matching and labeling program 9 that identifies the document by class and sub-class and labels the objects in the document (col 5, lines 1-5). The system identifies a document by dividing its relevant areas into segments. The structural characteristics, i.e., the segment's physical location of the area on the document, and the relational characteristics, i.e., the segment's location with respect all the other segments in the document are matched against the expected physical and relational characteristics provided by the document knowledge base (col 5, lines 20-27). Borrey also discloses a retrieval and execution program 11 that allows a system operator to select retrieval criteria for a certain image and the program will search the database 13 for records corresponding to the search criteria. When a match is found between the request and an image file, the appropriate image record is brought from the image data storage file 3 and displayed on CRT or is printed (col 23, lines 40-47). During the classification process, described above, the various relevant segmented areas of a document are labeled as known objects by the system. This

means that these known areas such as an address, a date or an account number can be searched

for and retrieved by the system (col 23, lines 50-56). Borrey also discloses that in another

exemplary embodiment, the retrieval and execution program 11 is used to create tables of

contents and abstracts of documents. By defining the characteristics of titles and areas of

importance of certain documents and placing this information in the execution knowledge base

15, the matching and labeling program 9 will create a table of all objects in documents meeting

these criteria. The retrieval and execution program 11 will then, for each class of preselected

document, present on the CRT or print a list of all titles or relevant areas, thereby creating a table

of contents. Direct access to the specific page on which the object is located is also provided 9col

25, lines 54-66).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to integrate the teachings of Borrey to the teachings of Sotomayor such

that paper documents can be electronically processed and stored in an organized manner to

faciliate a retrieval of a document, words or section.

Re claims 18 and 28: Sotomayor discloses an automatic index creation for a word

processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is

scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches

searching to find occurrences of items that correspond to the defined sub-section delimiter.

Sotomayor also discloses that for the table-of-contents index list 43, the summary page generator

40 always generates all 6 heading levels rather than giving the user the ability to select the

number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches

using the found items to separate the document into the separate sections.

Sotomayor fails to teach scanning the document to generate scanned document data and

performing recognition functions on the scanned document data to generate a recognized version

of the document. Sotomayor also fails to teach defining a sub-section delimiter, wherein defining

the sub-section delimiter includes at least one of a document processor operator building a sub-

section delimiter definition from a list of predetermined potential sub-section delimiter

components, a document processor operator entering a sub-section delimiter through keyboard

keystrokes, entering a sub-section delimiter by selecting symbols on a displayed portion of the

electronic version of the document, and designating at least one demarcation point on at least one

displayed portion of the electronic document to create a list of demarcation points to be used as a

set of delimiter definitions.

Borrey discloses an application of a digital scanning device 1 to a document (col 4, lines

60-65). The output of the scanning device is a data stream containing a digital image of the

document in a machine readable form (col 4, lines 60-65). Borrey also discloses a matching and

labeling program 9 that identifies the document by class and sub-class and labels the objects in

the document (col 5, lines 1-5). The system identifies a document by dividing its relevant areas

into segments. The structural characteristics, i.e., the segment's physical location of the area on

the document, and the relational characteristics, i.e., the segment's location with respect all the

other segments in the document are matched against the expected physical and relational

characteristics provided by the document knowledge base (col 5, lines 20-27). Borrey also

discloses a retrieval and execution program 11 that allows a system operator to select retrieval

criteria for a certain image and the program will search the database 13 for records

corresponding to the search criteria. When a match is found between the request and an image

file, the appropriate image record is brought from the image data storage file 3 and displayed on

CRT or is printed (col 23, lines 40-47). During the classification process, described above, the

various relevant segmented areas of a document are labeled as known objects by the system. This

means that these known areas such as an address, a date or an account number can be searched

for and retrieved by the system (col 23, lines 50-56). Borrey also discloses that in another

exemplary embodiment, the retrieval and execution program 11 is used to create tables of

contents and abstracts of documents. By defining the characteristics of titles and areas of

importance of certain documents and placing this information in the execution knowledge base

15, the matching and labeling program 9 will create a table of all objects in documents meeting

these criteria. The retrieval and execution program 11 will then, for each class of preselected

document, present on the CRT or print a list of all titles or relevant areas, thereby creating a table

of contents. Direct access to the specific page on which the object is located is also provided 9col

25, lines 54-66).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to integrate the teachings of Borrey to the teachings of Sotomayor such

that paper documents can be electronically processed and stored in an organized manner to

faciliate a retrieval of a document, words or section.

Re claims 20 and 21: Sotomayor discloses an automatic index creation for a word

processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is

scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches

searching the document to find occurrences of items corresponding to the define sub-section

delimiter. Sotomayor also discloses that for the table-of-contents index list 43, the summary page

generator 40 always generates all 6 heading levels rather than giving the user the ability to select

the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches

using the found items to separate the document into the separate sections.

Sotomayor fails to teach scanning the document to generate a scanned document data,

performing recognition functions on the scanned document data to generate a recognized version

of the document, and the sub-section delimiter comprises marking a paper version of the

document with at least one predetermined machine-readable demarcation symbol prior to

scanning the document.

Borrey discloses an application of a digital scanning device 1 to a document (col 4, lines

60-65). The output of the scanning device is a data stream containing a digital image of the

document in a machine readable form (col 4, lines 60-65). Borrey also discloses a matching and

labeling program 9 that identifies the document by class and sub-class and labels the objects in

the document (col 5, lines 1-5). The system identifies a document by dividing its relevant areas

into segments. The structural characteristics, i.e., the segment's physical location of the area on

the document, and the relational characteristics, i.e., the segment's location with respect all the

other segments in the document are matched against the expected physical and relational

characteristics provided by the document knowledge base (col 5, lines 20-27). Borrey also

discloses a retrieval and execution program 11 that allows a system operator to select retrieval

criteria for a certain image and the program will search the database 13 for records

corresponding to the search criteria. When a match is found between the request and an image

file, the appropriate image record is brought from the image data storage file 3 and displayed on

CRT or is printed (col 23, lines 40-47). During the classification process, described above, the

various relevant segmented areas of a document are labeled as known objects by the system. This means that these known areas such as an address, a date or an account number can be searched for and retrieved by the system (col 23, lines 50-56). Borrey also discloses that in another exemplary embodiment, the retrieval and execution program 11 is used to create tables of contents and abstracts of documents. By defining the characteristics of titles and areas of importance of certain documents and placing this information in the execution knowledge base 15, the matching and labeling program 9 will create a table of all objects in documents meeting these criteria. The retrieval and execution program 11 will then, for each class of preselected document, present on the CRT or print a list of all titles or relevant areas, thereby creating a table of contents. Direct access to the specific page on which the object is located is also provided 9col 25, lines 54-66).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Borrey to the teachings of Sotomayor such that paper documents can be electronically processed and stored in an organized manner to faciliate a retrieval of a document, words or section.

3.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satomayor in view of Borrey as applied to claim 2 above, and further in view of Kuga et al (US 5,276,616). The teachings of Sotomayor as modified by Borrey have been discussed above.

Sotomayor as modified by Borrey fails to teach displaying the created index, checking that the displayed index is correct and correcting the index.

Kuga further discloses an index generating unit 6 including an index entry list generator 22 connected to text storage 20 for extracting index entries from the textual data, an index entry

storage 24 connected to index entry list generator 22 for storing the index entries outputted from

the generator 22, and an index editor 26 for editing the index entries stored in index entry storage

24 based on the instructions from the input unit 2, which includes a keyboard (col 7, line 24) and

for applying the edited index entries to printer 10. Such disclosure teaches checking and

correcting the index. Index editor 26 is for alphabetically rearranging the index entries and

classifying the same into different initial letters to enable printing of the index (col 7, lines 40-

52). Kuga also discloses a text input unit, which is a flexible disk driver for applying text data

stored in an external medium to text editor 18, and the output of the text editor is connected to

display (col 7, lines 34-36). Such disclosure teaches that the text is in an electronic form. Kuga

further discloses that the input unit 2 is to enable input by an operator by generating signals such

as character data or operation codes in response to a manual operation, a text editing unit 4

connected to the input unit 2, a display unit 8 for displaying the edited text or the like, an index

generating unit 6 connected to input unit 2 and text editing unit 4 for automatically generating an

index from the text edited by text editing unit 4 and index generating unit for printing the edited

text or the index on paper 28 (col 7, lines 10-23). Kuga teaches a keyword database for storing

extracted set of keywords that are updated and added by the operator through the keyboard (col

3, lines 35-45).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to integrate the teachings of Kuga to the teachings of Sotomayor as

modified by Borrey in order to ensure the accuracy of the index such that erroneous results are

not produced as a result from misinterpreted or misread document indexes.

4.   Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sotomayor in view of Borrey as applied to claim 10 above, and further in view of Schmidt et al

(US 4,903,229). The teachings of Sotomayor as modified by Borrey have been discussed above.

Sotomayor as modified by Borrey fail to teach that the print engine comprises a

xerographic printer.

Schmidt teaches a forms generating and information retrieval system utilizing a

xerographic print engine 24 (col 2 line 34).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to modify the teachings of Schmidt to the teachings of Sotomayor as

modified by Borrey because the xerographic print engine generates forms and inures the benefits

of graphic reproduction.

5.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sotomayor in

view of Borrey and Schmidt as applied to claim 15 above, and further in view of Herregods et al

(US 6,064,397). The teachings of Sotomayor as modified by Borrey and Schmidt have been

discussed above.

Sotomayor as modified by Borrey and Schmidt fail to teach that the print engine

comprises an inkjet printer.

Herregods teaches that a printer can be a inkjet printer (col 1 line 42).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time

the invention was made to modify the teachings of Herregods to the teachings of Sotomayor as

modified by Borrey and Schmidt because an inkjet printer can provide a reproduction of colored

document, therefore it can provide a more precise reproduction of the document when the

document includes colored features.

Allowable Subject Matter

6.   Claims 7 and 8 are allowed.

7.   The following is a statement of reasons for the indication of allowable subject matter:

        Prior art of record, Sotomayor and Saito, either taken alone or in combination fail to

teach performing one of document recognition and optical character recognition on the selected

exemplary sub-section title to determine at least one recognized property, and using the at least

one recognized property of the exemplary sub-section title as a sub-section delimiter definition.

Response to Arguments

8.   Applicant's arguments filed October 24, 2008 have been fully considered but they are not

persuasive.

        Applicant submits that Sotomayor does not disclose or suggest a user designating,

identifying, indicating or selecting a delimiter. Although Sotomayor teaches searching a

document using the delimiter, Borrey is relied upon for the teachings of the user selecting the

delimiter. As indicated in the rejection, Borrey teaches that "a retrieval and execution program

11 that allows a system operator to select retrieval criteria for a certain image and the program

will search the database 13 for records corresponding to the search criteria." Such disclosure of

Borrey teaches that the user designates, identifies, indicates or selects a delimter.

Applicant submits that Borrey teaches away from using OCR. However, OCR is not claimed in the claims being argued. Applicant also submits that Borrey teaches away from a user indicating at least one of a font size, font style and text string. However, the claims recites many options by using the phrase "at least one of" and does not limit the claim only to font size, font style and text string. Sotomayor discloses that IPF paragraph objects for source document 20, which are considered as either text location description, a specific point coordinate within the document or a machine-readable symbol. the IPF paragraph objects for source document 20 are also considered as special identification marks on a document. Applicant also submits that the present methods and systems are directed toward generating indexes or tables of contents for long cumbersome documents. However, such limitation is not claimed.

Applicant submits that Sotomayor is not combinable with Borrey, since there is no motivation to combine. However, the Examiner respectfully disagrees because both Sotomayor and Borrey are related to searching a document and as a result of searching the document an index or table or contents is created. Although different methods are used, it would have been obvious to an one in ordinary skill in the art to utilize different steps in each method and system and provide an integrated system to create a more enhanced system.

With respect to Applicant's arguments for claim 5, the Examiner understands that Sotomayor nor Borrey teaches a system without the use of an OCR. However, claim 5 recites "performing one of optical character recognition functions and document recognition functions." The examiner believes that Sotomayor as modified by Borrey teaches a document recognition function.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KUMIKO C. KOYAMA whose telephone number is (571)272-

2394. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Steve Paik can be reached on 571-272-2404. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kumiko C. Koyama/
Primary Examiner, Art Unit 2887
January 21, 2009